

**Notice of Allowability**

Application No.

10/789,043

Examiner

Michael C. Zarroli

Applicant(s)

WERTZ ET AL.

Art Unit

2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the after final submitted 1/11/06.
2. ☒ The allowed claim(s) is/are 1,2 and 4-24.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

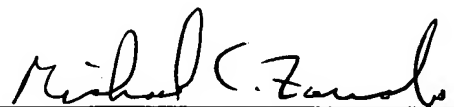
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 1/18/06.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

**MICHAEL C. ZARROLI**  
**PRIMARY EXAMINER**



### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Eric Groen on 1/23/06.

The application has been amended as follows: **Claims 1 and 14 will be revised as shown below.**

1. An LGA interconnect, for interconnection to further electrical components, said LGA interconnect comprising a substrate and a plurality of contact assemblies positioned on, and rigidly retained to, said substrate for connection with said electrical components, a frame housing positioned adjacent to said substrate and at least partially surrounding said plurality of contact assemblies, and further comprising alignment members attached to and projecting from said substrate for aligning said substrate relative to at least one of the electrical components, said alignment being directly between said substrate and further electrical components, not through said frame.

14. An LGA interconnect, for interconnection to further electrical components, said LGA interconnect comprising:

a substrate having an upper surface and a lower surface, marginal side edges, and an array of contact receiving openings therein;  
a plurality of contact assemblies positioned and retained in said substrate, **each said contact assembly comprised of a central portion** with a first contact portion **extending above said central portion and positioned** ~~position~~ above said upper surface and a second contact **portion extending below said central portion and** positioned below said lower surface, said plurality of contacts defining an array of contacts **with said central portions being fixed to said substrate;**  
a frame housing positioned around a periphery of said substrate; and  
alignment members attached to and projecting from said substrate for aligning said substrate relative to at least one of the electrical components.

2. The following is an examiner's statement of reasons for allowance:

Regarding claims 1 and 14 the prior art of record does not teach or suggest alone or in combination, the combination of elements especially the rigidly fixed position of the contacts and the alignment members attached to and projecting from the substrate.

The examiner previously believed that there was little difference between the substrate and frame in this art. The applicant has successfully argued that there is a distinction between the substrate and frame even when they are connected.

The prior art of Hachuda et al discusses some claim elements except for the rigid fixation of the contacts.

The prior art of Trout et al discusses all the claim elements but cannot be used as prior art because it has the same filing date as the applicant. Trout et al also has the same assignee but a different inventive entity. See the attached interview summary/e-mail explaining the Trout et al provisional application.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Zarroli whose telephone number is 571-272-2101. The examiner can normally be reached on 7:30 to 3:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, T.C. Patel can be reached on (571) 272-2800 ext 39. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael C. Zarroli  
Primary Examiner  
Art Unit 2839

*MCZ*  
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